

**REMARKS**

Reconsideration and allowance are respectfully requested. Applicants appreciate that the Examiner has not issued a final rejection and believe that that is the appropriate step to take to enable us to develop our arguments.

**Rejection of Claims 3-4, 6-18, 20, 22 and 24-28 Under 35 U.S.C. §103(a)**

The Office Action rejects claims 3-4, 6-18, 20, 22 and 24-28 under 35 U.S.C. §103(a) as being unpatentable over Joffe et al. (U.S. Patent No. 6,185,619) ("Joffe et al.") in view of Narendran et al. (U.S. Patent No. 6,070,191) ("Narendran et al."). Applicants note that in response to Applicants' arguments that the Joffe et al. and Grove et al. references fail to teach limitations of the claims that the Examiner in reviewing the matter has now rejected the claims in view of Joffe et al. and Narendran et al. arguing that it is obvious to one of skill in the art to incorporate Narendran et al.'s teachings of choosing a content distribution only if a measured load of one of the plurality of content distribution networks does not exceed a predetermined capacity reservation within the teachings of Joffe et al. The Office Action asserts that the purpose of the combination would be to increase the tolerance of faults occurring in the underlying hardware and reliability over prior art web services said by Joffe et al. in lines 4-9 of column 4. The Office Action also notes that Narendran et al. provides motivation to combine these by stating that these techniques ensure that the load is properly balanced across the documents servers as discussed in column 3, lines 7-11. Applicants respectfully traverse this rejection and will establish a convincing case that one of skill in the art would not have sufficient motivation or suggestion to combine Joffe et al. with Narendran et al.

To establish a *prima facie* case of obviousness, the Examiner must meet three criteria. First, there must be some motivation or suggestion, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to combine the references.

Second, there must be a reasonable expectation of success, and finally, the prior art references must teach or suggest all the claim limitations. The Examiner bears the initial burden of providing some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." MPEP 2142.

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). MPEP 2143.01.

Furthermore, if the examiner determines there is factual support for rejecting the claimed invention under 35 U.S.C. 103, the examiner must then consider any evidence supporting the patentability of the claimed invention, such as any evidence in the specification or any other evidence submitted by the applicant. The ultimate determination of patentability is based on the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The legal standard of "a preponderance of evidence" requires the evidence to be more convincing than the evidence which is offered in opposition to it. With regard to rejections under 35 U.S.C. 103, the examiner must provide evidence which as a whole shows that the legal determination sought to be proved (i.e., the reference teachings establish a *prima facie* case of obviousness) is more probable than not. MPEP 2142.

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered

to the extent that they are in analogous arts. Where the teachings of two or more prior art references conflict, the examiner must weigh the power of each reference to suggest solutions to one of ordinary skill in the art, considering the degree to which one reference might accurately discredit another. *In re Young*, 927 F.2d 588, 18 USPQ2d 1089 (Fed. Cir. 1991). MPEP 2143.01.

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

With these principles in mind, Applicants shall explain why the overall suggestive power of each reference is quite clear in this case that there is express teachings away from the combination of these references.

We first turn to Joffe et al. This reference teaches a distributed computing system that assigns user requests to replicated servers that meets the goals of a particular routing policy. It is clear throughout the teachings of Joffe et al. that the use of replicated servers is a basic feature of their invention. Column 1, line 67 teaches that one approach is to place identical content servers at strategic locations around the world. Column 2, line 58 teaches that one technique is based on a selective host routing system that uses multiple replicated servers all with the same network address that is located at different points along the network topology. They continue to discuss the challenges in identifying the appropriate server for content requests based on the particular configuration of the domain name service (DNS) approach. Accordingly, in column 3, line 33 they discuss while previous products consider server load and network characteristics they do not make an integrated server selection. For this reason, Joffe et al. assert that what is needed in the art is a system that automatically selects an appropriate server from which to retrieve a data object for a user based on the user's request and the capabilities and topology of the underlying network. The Summary of the Invention section, column 3, line 46 explains "the invention

provides a distributed computing system and method to assign user requests to replicated servers contained by the distributing computing system in a manner that attempts to meet the goals of a particular routing policy.” (emphasis added) Furthermore, column 4, line 4 states that the advantages to the approach as according to the invention are increased tolerance of fault occurring in the underlying hardware and reliability over prior art web service. While the Office Action cites this as one of the benefits for obviousness to combine, it is clear within the overall teachings of Joffe et al. that the “best server” routing policy that is taught in this reference require replicated servers to be maintained throughout the computing distribution environment. As we shall see, Narendran et al. expressly teach away from such an approach.

Narendran et al. teach a server system that processes client requests received over a communication network that includes a cluster of N document servers and at least one redirection server. Each of the document servers manages a set of documents locally and can service client requests only for locally available documents. A set of documents are distributed across the document service in accordance with a load distribution algorithm which may be utilized to access rates of documents as a metric for distributing the documents across the servers and determining the redirection probabilities. See Abstract. In the Background of the Invention, Narendran et al. discuss the replicated server requirement of Joffe et al. Column 2, line 28, discusses service side techniques that are based on caching or mirroring documents on geographically distributed sites. They explain that the replicated server technique can be referred to as geographic push caching or service side caching wherein client requests are sent to a home server which then redirects the request to a proxy server closer to the client. The redirection is based on geography and load. Dissemination of document information from the home server is used to keep the caches consistent. The Joffe et al. replicated server approach is described in Narendran et al. as “limited in their scalability because of the need for keeping caches consistent.

Furthermore, the load balancing achieved may be limited at the location information if the document is cached at the client. Fault-tolerance is also an issue as it will be difficult for the home services to keep dynamic information about the servers that are faulty.” Narendran et al. then introduce their invention as a response to the replicated server approach and explain the problems associated with replication. See column 2, lines 58 and 59. Narendran et al. introduce a load distribution algorithm that is used for initial distribution of a set of documents across the servers and the determination of the redirection probabilities. Given a specific degree of document replication k, the load distribution algorithm ensures that at least k replicas of each document are present after document distribution is complete. The algorithm can also ensure that for all of the documents combined no more than N-1 redundant replicas will exist in the system. The redirection servers redirect requests to one of the replicas with the corresponding redirection probability. The load distribution algorithm together with this redirection mechanism ensures that the load is properly balanced against the N document servers. Column 3, lines 1-11. Applicants note that Figure 2 of Narendran et al. illustrate an example of the redirection server 14-1 and document servers S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub> and the documents 1-5 which are distributed over the document servers.

The Office Action asserts that it would have been obvious to one of skill in the art of networking at the time of the invention to incorporate Narendran et al.’s teachings of choosing a content distribution system within the teachings of Joffe et al. for the purpose of increasing tolerance of faults occurring in the underlying hardware and reliability. However, as has been demonstrated, rather than suggesting the combination of these references Narendran et al. is expressly critical of the replicated server approach and identifies limitations within that approach. Narendran et al. proceed to modify the replicated server approach with their document distribution approach which expressly differs from the teachings of Joffe et al. Because these

teachings not only differ from one another but the suggestive power of Narendran et al. expressly identifies the replicated server approach as problematic and in need of correction, Applicants respectfully submit that we have established a strong case for a lack of sufficient motivation or suggestion to combine these references by a preponderance of the evidence.

An additional reason exists in the quotation cited above from the MPEP wherein if the blending of these references would require a modification of a fundamental principle of one of the references that there could be no obviousness to combine. Clearly in this case, Joffe et al. require, within the context of their invention, a network of replicated servers contained within the distributed computing system. Without having replicated servers, then their method and apparatus for balancing the processing load on the replicated network servers would have to be modified. Applicants respectfully submit that the context of having replicated servers is clearly a fundamental principle within the teachings of Joffe et al. Thus, if the data distribution approach of Narendran et al., which provides the benefit of load balancing and fault tolerance (as is identified in the Office Action as the reason for combination) were to be incorporated into Joffe et al., then the basic principle of having replicated servers contained within the data distribution system would have to be modified to accommodate the load distribution algorithm of Narendran et al. However, as can be seen from Figure 2 and from the basic discussion of Narendran et al., Narendran et al. teach away from replicated servers and implement their document distribution algorithm in response to the basic concept of Joffe et al. Clearly, Joffe et al. would have to be modified to blend the principles of Narendran et al. Accordingly, this additional reason further supports Applicants' argument that one of skill in the art would therefore not have, by a preponderance of the evidence, *motivation* to make such a combination.

For these numerous reasons set forth above, Applicants respectfully submit that claims 3, 4, 6-18, 20, 22 and 24-28 are patentable and in condition for allowance inasmuch as it is inappropriate to combine the primary references cited in the Office Action.

**CONCLUSION**

Having addressed all rejections and objections, Applicants respectfully submit that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited. If necessary, the Commissioner for Patents is authorized to charge or credit the **Law Office of Thomas M. Isaacson, LLC, Account No. 50-2960** for any deficiency or overpayment.

Respectfully submitted,

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